II. THE ECONOMICS OF TYING

Q. WHAT IS THE ECONOMIC NATURE OF CLOSECALL'S COMPLAINT?

A. CloseCall asserts that Verizon MD refuses to supply CloseCall's local exchange customers with VM and DSL services, either as retail services or as wholesale services supplied to CloseCall. As a result, CloseCall claims that it is disadvantaged in the market for local exchange services because customers value Verizon's VM and DSL services and are thus less likely to shift to CloseCall for basic local exchange services if they must give up their Verizon VM and DSL services. CloseCall claims that this refusal amounts to an anticompetitive tying of VM and DSL services with local exchange service and that such tie-ins "leverage" Verizon's market advantage in providing VM and DSL services to restrict local exchange competition.

Q. IN LAYMAN'S TERMS, IS CLOSECALL'S COMPLAINT REASONABLE?

A. No. In order for Verizon MD's business plans to impair CloseCall's ability to compete for residential local exchange customers, Verizon MD would have to be essentially a monopoly provider of VM and broadband Internet access services to residential customers who are on the margin between subscribing to CloseCall or Verizon MD for basic exchange service. Otherwise, the actions of which CloseCall complains would have no effect on its business: potential CloseCall customers would simply buy VM and broadband access services from someone other than Verizon. Sections III and IV below show that customers have many substitutes for Verizon MD's VM and DSL services. Thus, wholesale or retail naked provision of Verizon MD's VM and DSL service are not necessary for CloseCall to compete for local exchange customers, and their absence does not impair the process of local exchange competition in Maryland.

Q. WHAT IS "TYING" IN ANTITRUST ECONOMICS?

A. The mechanics of tying are simple: a monopoly supplier of service A refuses to supply that service by itself and requires customers to also purchase service B, for which it faces competition. Under some circumstances, the monopolist can make more money by

following such a strategy and competing suppliers of service B can be placed at a competitive disadvantage because any customer who buys their services must find a substitute for the monopolist's service A, which is, by assumption, hard to do. Technically, tying is a form of monopoly leveraging in which market power in one market (A) is leveraged to give a competitive advantage in a more competitive market (B).

Q. IS TYING ALWAYS PROFITABLE, SO THAT IT IS LIKELY TO BE A POPULAR ANTICOMPETITIVE STRATEGY?

A. No. Careful economic analysis has questioned whether such leveraging strategies can generally be profitable for the monopolist, and, with some exceptions, these strategies can be shown to be unprofitable.[2] When tying is unprofitable, it is unlikely that a firm would voluntarily adopt a business plan that entailed tying. Since we frequently observe telecommunications firms offering various packages of services to different customers, it is likely that there is some reason other than tying that makes selling packages of services attractive. For example, we rarely see local exchange carriers offering naked call-waiting and inside wire maintenance, and it is probably the case that the economies of scope in providing those services together with basic exchange service are so large that no firm could profitably supply such services on a stand-alone basis. This conclusion is also reinforced in the present case by the observation that most telecommunications firms voluntarily choose to provide some services to everyone and some services exclusively to their presubscribed customers.

Q. WHY IS TYING GENERALLY UNPROFITABLE?

A. The basic reason why tying fails to increase profits in general is that the monopolist would be expected to charge the profit-maximizing price for service A *ab initio*, so that no additional profit could be realized from selling the service at a higher price. Tying the supply of service B to that of A effectively raises the price of service A for those customers

[2] See, for example, the section on tie-in sales in the standard text: D.W. Carlton and J.M. Perloff, *Modern Industrial Organization*, Second Edition, New York: HarperCollins, 1994, pp. 467-480.

who would not ordinarily choose to buy B at the competitive market price, and an effective price increase for service A would reduce rather than increase profits to the firm.

Q. IS TYING ALWAYS UNPROFITABLE?

A. No, not always. There are several circumstances when tying can be profitable for a firm with market power. When demands for services A and B are interrelated, it is sometimes possible that requiring the purchase of B can facilitate price discrimination in the monopolized service A, which can increase firm profits.[3] A second exception occurs when service A is regulated, so that regulation prevents the monopolist from charging the profit-maximizing price for A in the first place. Here, forcing customers to buy B in addition to A could increase firm profits because its regulated price is less than the monopoly price. Thus, an effective price increase for service A (caused by bundling the service together with service B at a higher-than-competitive price) could increase profits.

Q. HOW DOES THIS THEORY OF TYING APPLY TO CLOSECALL'S COMPLAINT?

A. It does not.

Q. WHY NOT?

A. Because the markets for VM and broadband access services are effectively competitive in Maryland. Verizon MD's business decision not to supply VM and DSL services on a wholesale basis or as naked (that is, stand-alone) retail services is the very opposite of monopoly leveraging or tying. Tying occurs when a firm requires customers to buy its competitive service (B) as a condition of sale of its monopoly service (A). Verizon MD has demonstrably no market power in the markets for voice messaging and broadband Internet access and those markets are essentially unregulated: see Sections III and IV of my testimony below. On the other hand, Verizon MD is regulated in the provision of

[3] Classic examples of tying facilitating price discrimination occur where the purchase of a machine is tied to the purchase of material the machine needs to function: *e.g.*, razors and razor blades, computer processors and punchcards, *etc.*

residential basic exchange services and may retain market power in some portions of those markets. Verizon MD is accused of providing VM or DSL (the competitive services) exclusively to its local exchange customers (the less-competitive services). Verizon MD's actions are thus the exact *opposite* of leveraging: only customers of Verizon's less-competitive (local exchange) service are permitted to buy its more-competitive (VM and DSL) services, not the other way around. Verizon MD can extract no additional profits from its VM or DSL services by combining them with its basic exchange services: customers have viable substitutes for Verizon MD's VM and DSL services, so any attempt effectively to increase the prices of those services would cause customers to switch suppliers. Thus, because Verizon has no monopoly position or market power in the supply of VM or broadband access, there can be no harm to competition or competitors in the local exchange market from its business decision not to supply VM or DSL services on a resold or naked retail basis.[4]

Q. WOULD THIS CONCLUSION BE AFFECTED IF VERIZON MD WERE FOUND TO HAVE MARKET POWER FOR RESIDENTIAL AND SMALL BUSINESS BASIC LOCAL EXCHANGE SERVICES?

A. No. Even if Verizon MD were thought to retain some degree of market power for residential and small business basic exchange service in Maryland, the conclusion that neither competition nor competitors are harmed by Verizon MD's business decision not to resell or supply naked VM or DSL on a retail basis would be unaffected. The reason is simple. Under the assumption that Verizon MD had market power in these local exchange markets and its services were price-regulated, it could possibly increase profits by requiring its local exchange customers to buy VM or DSL at prices that exceeded the prevailing competitive market levels. However, that is the reverse of the business strategy that it is following and that CloseCall is complaining about. CloseCall objects to Verizon MD requiring its VM and DSL customers to buy its basic exchange services, not the other way

[4] Moreover, since Verizon MD's prices for its local exchange services are generally regulated, it could not charge a higher-than-market price for local service if it were able to require its local exchange customers to buy VM or

around, and it complains that it is unfairly disadvantaged in the local exchange markets because its customers cannot buy Verizon MD's VM and DSL services.

Q. IF VERIZON MD ISN'T ENGAGING IN ANTICOMPETITIVE TYING, WHY DOES IT CHOOSE NOT TO SUPPLY RESOLD OR NAKED RETAIL VM OR DSL SERVICES?

A. From the fact that Verizon MD does not voluntarily supply resold or naked retail VM and DSL services, we can conclude that it believes its profits in the long run will be higher under such a plan. However, such higher profits need not—and, in fact, cannot—stem from anticompetitive tying. They *cannot* be ascribed to anticompetitive tying because, as described above, Verizon MD has no market power in the VM or broadband access markets to attempt to leverage into local exchange markets. Indeed, there are a number of other, competitively benign, explanations.

First, such bundling of services should not be surprising because this behavior is prevalent in the industry. No carrier voluntarily provides wholesale services to competitors at an avoided-cost discount. Moreover, few local exchange carriers offer naked retail telecommunications services. For example, no local exchange carrier supplies naked vertical services: the cost to supply call-waiting to another LEC's basic exchange customer, particularly the network costs and the costs of establishing, measuring and billing the account would be prohibitive.

Second, mandatory provision of a naked retail service entails additional problems and costs above and beyond the costs incurred in supplying the service to one's own basic exchange customers. Since there would be no monthly bill for basic exchange service, a separate account would have to be established for the customer, including preparing and rendering a separate bill, separate credit verification, new and possibly complex procedures for resolving repairs or service quality problems, etc.

DSL services.

In sum, there are generally thought to be large economies of scope in the supply of local exchange telecommunications and information services: that is, it is thought to be significantly cheaper to supply them together in one firm than to supply them separately to a customer. This technological fact is an important reason why a series of FCC decisions made it possible for basic telephone and enhanced information services to be provided by the same entity, essentially regulating the underlying telecommunications network components while leaving the retail information service unregulated. In its complaint, CloseCall is asking the Maryland Public Service Commission to impose the *opposite* approach (re-regulating retail information services) on top of the regulatory structure established by the FCC. Imposing such conflicting regulations in Maryland would raise difficulties for multi-state telecommunications providers. Economically, requiring Verizon MD (and no other service provider) to supply ancillary information services on a stand-alone basis irrespective of their cost and profitability would significantly distort regulation as well as incentives to compete and invest in the markets for the ancillary and basic exchange services.

A. Effects on Competitors

Q. HOW DOES VERIZON MD'S DECISION NOT TO PROVIDE RESOLD WHOLESALE OR NAKED RETAIL VM AND DSL SERVICES AFFECT THE ABILITY OF FIRMS TO COMPETE FOR RESIDENTIAL AND SMALL BUSINESS CUSTOMERS IN THE MARKET FOR BASIC LOCAL EXCHANGE SERVICE?

A. It does not. As outlined in Sections III and IV below, customers have many alternatives to Verizon MD's retail VM and DSL services, and competitors have alternative mechanisms to provide those services if they wish to compete in those markets or to provide bundles of VM, broadband access and local exchange services.

Q. IN RESPONSE TO THE QUESTION "WHY DOESN'T CLOSECALL SUPPLY VM AND DSL SERVICE TO ITS OWN CUSTOMERS," MR. MAZERSKI ASSERTS THAT CLOSECALL IS NOT REQUIRED BY LAW TO PROVIDE THOSE SERVICES. HE TESTIFIES (AT 13 AND 29) THAT CLECS ARE NOT OBLIGED UNDER THE TELECOMMUNICATIONS ACT OF 1996 TO "PURCHASE SPECIFIC EQUIPMENT OR OTHER FACILITIES IN ORDER TO ENTER NEW MARKETS." DO YOU AGREE?

A. Yes. CloseCall, unlike Verizon MD, is free to enter whatever markets it chooses and invest in whatever facilities it thinks will be profitable. And while Verizon MD is required to provide local exchange service to any requesting customer, Verizon is "not required by law" to "supply VM and DSL service to its own customers." Nor, however, is CloseCall entitled to every possible advantage if it chooses not to invest in facilities. The 1996 Act imposes certain discrete obligations to resell telecommunications services and offer unbundled network elements to CloseCall. CloseCall does not, and cannot, argue that the 1996 Act imposes the duties it seeks to impose here. In fact, the FCC has expressly rejected such arguments.[5] Neither the Telecommunications Act nor sound economic policy remotely suggests that Verizon MD should be required to provide information services to CloseCall's customers if and for however long CloseCall chooses not to supply those services itself. Mr. Mazerski complains (at 30) that:

> It is not economically feasible or reasonable to expect CloseCall to modify its operations and business plans, nor to undertake the massive investment necessary to deploy line-sharing DSL technologies merely to counter Verizon's

[5] For DSL-Internet access see, Notice of Proposed Rulemaking, *In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, Universal Service Obligations of Broadband Providers, Computer III Further Remand Proceedings:* CC Docket No. 02-33 & CC Dockets Nos. 95-20, 98-10, released February 15, 2002, (*DSL Notice*) ¶5; for VM see, Memorandum Opinion and Order, *Application of BellSouth Corporation et al. for Provision of In-Region, InterLATA Services in Louisiana*, 13 FCC Rcd 20599, 20780, ¶ 314 (1998) ("*Second Louisiana Order*") ("voice mail and voice messaging services are information services, not telecommunications services, and, thus, are not subject to [checklist item (xiv), which incorporates section 251(c)(4)'s resale requirements]")

> unjustified and exclusionary practices. Such a strategy would only benefit Verizon, since Verizon could always remain one step ahead of its competitors, including CloseCall, by changing its exclusionary practices once we've committed to a particular defensive strategy, rendering CloseCall's investment worthless and its effort wasted.

In reality, though, CloseCall could readily collaborate with a DSL provider to offer a combination of voice and data service to its existing or potential customers. Verizon MD's legal obligations should not be altered by CloseCall's voluntary decision not to engage in line splitting.

In effect, CloseCall is asking this Commission to compel Verizon MD to adapt its business plans for its retail information services to accommodate whatever business plan CloseCall elects to follow. Whatever might result from such a requirement, it would not be competition in the markets for VM services, broadband Internet access or basic exchange telecommunications service. Such requirements would turn Federal and State policies favoring development of competition in telecommunications markets on their heads, and there is no economic or policy basis for this Commission to turn back the clock in this manner. Moreover, as I mentioned below, CloseCall apparently already provides a VM service in some circumstances, and nothing prevents CloseCall from providing its own VM services to local customers as other CLECs have chosen to do, without receiving the special treatment that CloseCall seeks here.

More to the point, Mr. Mazerski and CloseCall are seeking to avoid competition by this request. CloseCall asserts that local exchange customers value packages of VM and broadband access services together with local exchange service. Rather than supply what it believes its potential customers want, CloseCall observes that its immediate costs would be lower if someone else were forced to provide these services and asks that Verizon MD be required to invest money and effort to develop resold wholesale or naked retail services. Where would this process end? Many Verizon MD local exchange customers find Verizon Calling Cards convenient. Some like Verizon's call-waiting service. However, competition means providing the services that customers want, regardless of whether it is convenient for a firm to do so.

Q. WHY WOULD COMPETITION BE HARMED BY CLOSECALL'S REQUEST? THE COSTS TO VERIZON MD ARE CLAIMED TO BE SMALL AND SURELY COMPETITION WOULD BE ENHANCED BY PUTTING EVERY LOCAL EXCHANGE CARRIER ON AN EVEN FOOTING WITH RESPECT TO VM AND BROADBAND ACCESS SERVICES. DO YOU AGREE?

A. No. First, the costs of engaging in regulatory managed competition—particularly in markets subject to vigorous competition and rapid technical change—are immense, and it is difficult to tell which firms and which technologies will gain and which will lose in this process. Second, competitors in the VM and broadband access markets would not welcome the mandatory provision of discounted wholesale Verizon MD VM and broadband access services. They have already invested in their infrastructures and marketed their products and services, presumably planning to sell VM and broadband access services to new local exchange competitors. Under CloseCall's plan, CLECs would have the option of using cheap, resold Verizon MD services rather than provisioning their own.

B. Effects on Consumers

Q. BUT WOULDN'T CLOSECALL'S CUSTOMERS BE BETTER OFF IF THEY COULD CONTINUE TO RECEIVE VERIZON MD INFORMATION SERVICES AFTER SWITCHING TO CLOSECALL'S LOCAL EXCHANGE SERVICE?

A. No. In the long run, consumers would be injured by actions that have the effect of stifling competition in the VM and broadband access markets. Neither Verizon MD nor its CLEC competitors would have any incentive to invest in new facilities and technologies because (i) Verizon MD would be forced to share the benefits from its investment and its research and development and (ii) entrants would be able to take advantage of Verizon MD's investment and new service development and would have less incentive to develop their own. Such competitive distortions have particularly large effects in high-investment, high-

technology industries where investment is sunk and risky and where the market outcome among competing technologies is unpredictable.

III. THE MARKET FOR VOICE-MESSAGING SERVICES IN MARYLAND

Q. WHAT ARE VOICE MESSAGING SERVICES?

A. VM services are facilities or services used to acquire, store, manipulate, forward and retrieve voice messages. In addition to the LEC-based VM services, they include services provided by simple answering machines, hardware and software provided with telephone sets, key sets and PBXs, answering service bureaus, Internet-based IP voicemail providers, paging services and other mobile service providers.

Q. WHAT LEC-BASED VM SERVICES ARE AVAILABLE TO CONSUMERS IN MARYLAND?

A. Maryland consumers have a number of choices available to them for VM services. First, it appears that CloseCall itself offers some form of voice messaging to some customers. CloseCall's website refers to:

> **Personal Message Center** – with CloseCall America Personal Message Center working adults can receive text and voice messages in cases of emergency or just to keep in touch.[6]

Second, a quick survey of the Baltimore and Annapolis Verizon Yellow Pages (at SuperPages.com) shows 70 and 28 telephone answering services offered in those cities respectively.[7] An Internet search identifies MCI, RDI Voice Mail, Action 800, Chesapeake Teleservices and A&A Communications, of Silver Spring, MD as providing traditional voice messaging services throughout Maryland,[8] while firms such as uReach.com,

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[6] http://www.closecallamerica.com/products/products.htm

[7] http://www.superpages.com/ accessed on September 23, 2002.

[8] http://www.theneighborhood.com/res_local_service/jsps/join_plans.jsp?subpartner=FREEMONTH&rateCode=&state=MD&service_provider=MCIT&Bus_Ind=RES&wireSolution=Y&group=001&cos=&ANI=4104944043;http://www.rdivoicemail.com/index.htm;http://www.action800.com/; http://www.chestel.com/who_we_are.html; http://www.a-acommunications.com/answering.html.

Onebox.com, Internet Call Manager, Buzzme and HotVoice offer Internet-based voicemail services to Maryland customers.[9]

Third, CLECs and other local exchange providers (e.g., corporations and universities) can supply their own low-cost voicemail platforms, buying equipment from independent manufacturers such as Octel and buying the necessary switching elements (e.g., call-forward, busy-no-answer) and transport links from Verizon MD. For example, Cavalier Telephone offers Voice mail in all of its Maryland markets.[10] A list of current providers of traditional VM services is provided as Attachment 2 to my testimony. The attachment also includes statements about the high quality and availability of VM services. For example, Allegiance Telecom states:

> Allegiance Telecom voice mail is a must-have productivity tool for every business.[11]

and, Advanced TelCom Group states:

> ATG Direct Voice Mail is a valuable business tool offering your customers a way to communicate with you, even when you are unavailable.[12]

Q. IN DETERMINING WHETHER VERIZON MD HAS MARKET POWER FOR VM SERVICES, ARE THERE OTHER SUBSTITUTES FOR VERIZON MD'S VM SERVICES THAT THE COMMISSION SHOULD CONSIDER?

A. Certainly. One of the most important sources of competition for Verizon MD's VM services is what economists call "intermodal" competition: that is, competition from a service that uses different technology and has different characteristics than LEC-based VM services but that provides the same (or a readily substitutable) functionality. By far the most important competitor to Verizon MD VM service is the answering machine.

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[9] http://www.ureach.com/;http://www.onebox.com/index.html;http://www.internetcallmanager.com/; http://www.buzme.com/buzme/default.asp;http://www.hotvoice.com/en/support/faq_general.htm

[10] http://www.cavtel.com/residential/res_md.php

[11] http://www.algx.com/pdf/voice.pdf

A. Answering Machines

Q. IS AN ANSWERING MACHINE A VIABLE SUBSTITUTE FOR LEC-BASED VM SERVICES?

A. Certainly. The technology is different, and there are differences in the services provided which may be more or less important to different types of consumers. Nonetheless, at least one commercial supplier advises customers that

> [t]hese days, the question isn't so much which phone answering device (TAD) to buy, but whether to go with your own hardware or a commercial voicemail service. There are many advantages to the latter, but for personal or home-office use, **a dedicated answering machine is still the most economical and convenient choice.**[13]

As a substitute to voicemail, the household penetration rate of answering machines continues to grow. According to the most recent data from the Consumer Electronic Association (CEA), the household penetration rate for "telephone answering devices" is 78 percent in 2002,[14] increasing from 77% in 2001.[15] One reason for this continued popularity is undoubtedly economic. Quite simply, answering machines are a cheaper alternative to voice mail service: "Basic voice mail costs about $5 a month, or $60 a year. A digital answering machine can be had for as little as $25 or $30, or you can buy a phone with one built right in."[16]

Furthermore, answering machines, whether as stand-alone units or as included in a landline telephone unit, have added features that make them an attractive option. One such product, the AT&T 1455 comes with a "built-in answering machine" which has "three voice-mail

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[12] http://www2.callatg.com/index_sub_home_2.html.

[13] Phone Warehouse, *The Answering Machine*, http://www.affordablephones.net/answeringmachine.htm. Emphasis added.

[14] eBrain/CEA Market Research, *FastFacts Household Penetration Rates for Consumer Electronics Products* (2002).

[15] eBrain/CEA Market Research, *FastFacts Household Penetration Rates for Consumer Electronics Products* (2002)

[16] M. Gold, *Electronic Evolution: VCRs, Cassette Decks Follow Corded Phones To Scrap Heap*, Calgary Herald at ES06 (Apr. 6, 2002).

boxes with separate indicator lights, so you can see whether the message is for you or your teenagers."[17] Customers may prefer such visual cues to the stutter dial tone of Verizon MD VM service, a feature that is noted in Mr. Mazerski's testimony. In addition, answering machines provide convenient call-screening functions which switch-based VM services cannot. On the other hand, Verizon MD VM services may be more reliable (it works when household power is out and has larger storage capacity than some machines) and can take messages when the phone is actually in use.

Answering machines are also a practical option for businesses, in that they combine a relatively low expense with the ability to handle differing volumes of calls and types of usage: "Answering machines are much less expensive than voice mail systems or answering services. In addition, as answering machine technology has improved, these machines have become much more flexible at handling large volumes of messages or multiple users."[18]

Answering machine technology and features have advanced to the point that they are capable of competing with voice mail service to provide businesses with all of their messaging needs: "Many businesses need different messages for different times of the day. Answering machines equipped with a multiple greeting feature can easily handle this requirement. In most cases, you record multiple greetings, and then set specific times when each answering machine message should be played. Some answering machines offer multiple mailboxes that allow callers to route messages to a specific recipient. The caller simply enters a touch tone code and records the message in a specific mailbox. When people return to the office, they can play just the answering machine messages left in their mailbox. For those who do not wish to handle individual messages, an announce-only feature allows a recorded message to be left without giving callers the option to record a response. Another useful feature is remote activation. This allows you to turn on the answering machine via telephone in case someone in your office forgets to activate it. One money-saving feature is toll saver, which modifies the number of times the phone will ring

[17] *Best Picks Of Cordless Telephones*, The Times Union at D7 (Feb. 2, 2002).

[18] Phone Warehouse, *The Answering Machine*, http://www.affordablephones.net/answeringmachine.htm.

before the answering machine picks up. Typically, the answering machine will answer a call immediately when there are new messages. If no new messages have been recorded, the user can hang up before the answering machine picks up the line."[19]

B. Internet Voice Mail Systems/Internet Call Waiting

Q. WHAT INTERNET-BASED VOICE MESSAGING SERVICES COMPETE WITH VERIZON MD'S VM SERVICES?

A. Internet Voice Mail is another competitor of voice mail. Essentially, this technology "span[s] the gulf between voicemail and e-mail" and "packages voicemail into a standards-based MIME e-mail format, which can be transported over existing e-mail infrastructures and delivered to any e-mail end point."[20]

There are numerous companies that offer Internet voice mail service, as seen by the examples below:

- **Ericsson**: "Ericsson has software for desktop computers that lets you direct incoming text and Internet voice messages to the device of your choice, depending on whether you're busy, offline, away or unavailable. Similar software is being programmed into Ericsson's mobile phones."[21]

- **CallWave**: "CallWave works with the 'Call Forward On Busy' feature of your phone line to answer calls while you are online. Once activated, callers no longer get annoying busy signals when you are online. Instead, callers will hear a brief CallWave greeting after which they can leave a short message at the tone--that you will be able to hear instantly."[22]

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[19] Phone Warehouse, *The Answering Machine*, http://www.affordablephones.net/answeringmachine.htm.

[20] R. Anderson, *Message Overload*, Network Computing at 42 (Oct. 15, 2001) http://www.networkcomputing.com/1221/1221f12.html.

[21] A. Jesdanun, *Next-Generation 'Buddy Lists' Could Transform Phone Habits*, Associated Press (June 9, 2001).

[22] CallWave, Internet Answering Machine Software, http://www.callwave.com/findoutmore.asp?Ct=nav_broadband.

- **ICM**: "ICM is the simplest way to get and answer calls while you're on-line. ICM links your phone with the Internet so you are notified of calls while you surf, with built-in Caller ID and a variety of handling options."[23]

- **Pagoo**: "When friends call while you're online, Pagoo catches the call just like an answering machine. Seconds later, you can playback the voice message on your computer."[24]

  - **Receive messages while on-line.** Pagoo captures all your calls when you're on-line and stores them in your private Pagoo mailbox;

  - **Save money.** Pagoo is as low as $4.95 a month—a fraction of the cost of a second phone line;

  - **Be notified of messages and play them instantly.** You'll receive instant on-screen notification of new messages and can play them back immediately on your computer;

  - **Play messages while on-line.** Unlike traditional phone company voicemail systems, Pagoo allows you to instantly receive messages on your computer and listen to them without getting off the Internet;

  - **Retrieve messages anywhere.** Pagoo allows you to check your voice messages anywhere, anytime, with an Internet connection. Even better, retrieving your messages through the Internet means you can avoid costs like long distance telephone charges—great for checking messages on the road;

  - **Organize voice messages just like email.** Pagoo lets you organize and store your voice messages just like email.[25]

- **MessageBay**: "MessageBay creates custom Telephony Servers. We enable web recordings to be delivered to any telephone, and any telephone recordings to be delivered to any email address or website."[26] "MessageBay's Web Messaging Server is the ONLY product available today which allows users to record from the Web and retrieve voicemail by phone, as well as record from the phone and retrieve from the web."[27]

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[23] Internet Call Manager, *Home*, http://www.internetcallmanager.com/.

[24] Pagoo, *Missing Phone Calls While Online*, http://www.pagoo.com/cc.asp.

[25] Pagoo, *Pagoo Internet Call Waiting*, http://www.pagoo.com/services/services.html.

[26] Message Bay, *Web-To-Phone Messaging Server*, http://www.messagebay.com/prodtech/wms.php.

[27] Message Bay, *Web and Wireless Messaging Overview*, http://www.messagebay.com/prodtech/prodtech.php.

These voice messaging services are available to every residential and small business customer in Maryland, regardless of which local exchange carrier provides basic telephone service to the customer.

C. Wireless

Q. ARE THERE WIRELESS SUBSTITUTES THAT COMPETE WITH VERIZON MD'S VM SERVICES?

A. Yes. A recent study from Scarborough Research shows a 29 percent growth rate for cell phone ownership over the past two years with almost two-thirds (62 percent) of American adults owning a cell phone.[28] Wireless phone technology is also a competitor of voice mail, due in part to the fact that mobile phones are increasingly becoming available with voice message storage capabilities: "One such feature which is rapidly becoming a standard in mobile phones, is voice storage, the addition of an answering machine and voice memo function built directly into the mobile phone."[29] Due to this inclusion of message capabilities, the trend amongst the public is to give up use of their landline and rely on their mobile unit as their sole telephone, thus showing a "growing propensity people are having towards having one phone, one phone number, with an integrated answering machine on-board."[30]

This is a trend seen with both residential and business telephony customers. For business people, having a mobile phone with voice messaging capabilities is an absolute necessity: "For today's business people, it's crucial that they not only receive their messages, quickly, but are able to easily return them. By having a built-in answering device in their mobile phone they are assured of not missing an important call, are aware of receiving a call and

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[28] *Cell Phone Ownership Grows 29 Percent From 1999-2001 According To New Scarborough Study*, Scarborough Research (Mar. 18, 2002) http://www.scarborough.com/scarb2002/press/pr_cellphone.htm.

[29] M. Tacktill, *The Trend Towards Voice Features In Cellular and Wireless Phones*, http://www.winbond-usa.com/products/whitep/trend.pdf.

[30] M. Tacktill, *The Trend Towards Voice Features In Cellular and Wireless Phones*, http://www.winbond-usa.com/products/whitep/trend.pdf.

can return that call instantaneously."[31] Of course service providers offer voicemail, but the added steps involved in retrieving messages make the voice mail option less attractive to business people with time constraints. The individual "need[s] to call to check their voice mail to see if they even received a call, have the expense of placing a call to their voicemail, through the use of air time, and use precious battery power checking for messages. Of course one can call their voicemail from a wired phone to check their messages but that defeats the convenience and timeliness of having a cell phone for these activities."[32]

D. Unified Messaging

Q. ARE THERE OTHER SUBSTITUTES FOR VERIZON MD'S VM SERVICES IN MARYLAND?

A. Yes. Trends in the market indicate increased demand for unified messaging services in which messages sent by many different means—voice, fax or e-mail—can be received, stored and processed through a single interface. According to the Unified Messaging Buyers Guide:

> Unified messaging applications embrace the paradigm that all phone, electronic and voice messages, can be accessed from a central repository. In our case the desktop. Solutions in this category provide the user with the ability to utilize the familiar "point and click" interface of their PC to easily and seamlessly access their e-mail, voice mail, faxes, and schedules. Phone calls can be automatically dialed with the click of the mouse and conference calls set-up by dragging and dropping. Remote users or travelers can easily call into their system and have all of their messages played back, or read to them using text to speech conversion, and in many instances easily respond to these messages. Businesses large and small are realizing the potential of unified messaging solutions and are gaining huge savings from the efficiencies they yield. Sales force automation is a

[31] M. Tacktill, *The Trend Towards Voice Features In Cellular and Wireless Phones*, http://www.winbond-usa.com/products/whitep/trend.pdf.

[32] M. Tacktill, *The Trend Towards Voice Features In Cellular and Wireless Phones*, http://www.winbond-usa.com/products/whitep/trend.pdf.

> vertical market that is exploding thanks to the unified messaging packages provided by some of the vendors you'll find in this section.[33]

Although research firm Ovum placed total UM revenue at only $300 million for 1999, it predicts an explosion to about $4 billion within five years, with three-quarters of all businesses using UM. The reason is simple: UM is a much more efficient platform with respect to messaging and IT support. For instance, one study by The Radicati Group Inc., a consulting and market research firm in Palo Alto, Calif., found that support for UM averaged $208 per user, compared with $708 per user in companies administering separate e-mail, voice-mail and fax systems. Furthermore, users saved anywhere from 25 to 38 minutes per day as a direct result of more efficient message handling.[34]

> Unified messaging is really a simple concept: All your messages - voice, e-mail, fax, and even video messages - go to a single, unified inbox. Everything in your inbox is accessible from your desktop PC, any telephone or cellphone, or your laptop computer. Even from a web browser anywhere, you can review these messages, which appear as single-line summaries on your inbox screen. Click on a message and you see or hear it, no matter what the media type. Or using any telephone device, you can hear your voice messages, forward any received faxes to the nearest fax machine, or even have selected e-mail messages faxed or read to you. In other words, you can access any message, anywhere. The major selling point for UM is that it simplifies communication and saves users time. It gives you universal access to all your message types whether you are in your office, in your car, at home, or in front of your laptop computer. That's the vision statement for UM.[35]

An April 2, 2001 research brief titled "Clear Signs of Demand for UM" by industry analyst firm, Gartner, Inc., reported that nearly half the small businesses in the United States already have, or intend to buy, products or services to integrate their systems for handling messages sent through voice mail, e-mail or fax. "The days of standalone voice mail systems and fax servers are over, "Dr. Donald E. Brown, president and chief executive

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[33] Telephony World, *Welcome to the Unified Messaging Buyers Guide*, http://www.telephonyworld.com/unified/unified.htm.

[34] D. Robb, *Getting Messaging Together*, ComputerWorld (Jan. 29, 2001), http://www.computerworld.com/managementtopics/xsp/story/0,10801,57000,00.html.

[35] C. Bajorek, *Unified Messaging – The "Quiet" Application*, Computer Telephony (July 14, 2000) http://www.cconvergence.com/article/printableArticle?doc_id=CTM20000707S0005.